USSN 09/896,935

Current Status of All Claims in Application/

Amendments

1. (currently amended). A chemical vapor deposition process for forming a SiO_2 layer on a substrate comprising reacting water with a silicon precursor compound having the structure SiX_4, $Si(NR_2)_4$, $Si(OH)_a(OR)_{4-a}$ or $SiH_b(OR)_{4-b}$ wherein R is an alkyl group, each X is independently a halogen atom, and a and b are numbers from 0-4, in the presence of the substrate at a temperature of between about 290 K and 350 K and in the presence of ammonia, a monoalkyl amine, a dialkyl amine or a trialkyl amine ~~or a Lewis base~~ catalyst that is a gas under the conditions of the chemical vapor deposition process.

2 (currently amended). The process of claim 1 wherein the silicon precursor is ~~SiCl4~~ $SiCl_4$ or ~~Si(OR)4~~ $Si(OR)_4$ where each R contains up to four carbon atoms.

3 (original). The process of claim 1 wherein the temperature is from about 313 to about 333 K.

4 (currently amended). A chemical vapor deposition process for forming a SiO_2 layer on a substrate comprising reacting water with a silicon precursor compound having the structure SiX_4, $Si(NR_2)_4$, $Si(OH)_a(OR)_{4-a}$ or $SiH_b(OR)_{4-b}$ wherein R is an alkyl group, each X is independently a halogen atom, and a and b are numbers from 0-4, in the presence of the substrate at a temperature of between about 290 K and 350 K and in the presence of ammonia or a Lewis base catalyst that is a gas under the conditions of the chemical vapor deposition process. ~~The process of claim 1~~ wherein water is continually added to the process, and the silicon precursor is added intermittently.

5 (original). The process of claim 4 wherein the ammonia or Lewis base is added intermittently to the process.

6 (original). The process of claim 5 wherein the silicon precursor is added during the addition of the ammonia or Lewis base.

7 (original). The process of claim 5 wherein the silicon precursor is $SiCl_4$ or TEOS.

8 (original). The process of claim 7 wherein ammonia is added to the process.

9 (original). The process of claim 5 wherein the Lewis base catalyst is a primary, secondary or tertiary amine.

10 (original). The process of claim 1 wherein the substrate is silicon.

11 (original). The process of claim 1 wherein the substrate is an organic polymer.

A1 cont'd

12 (original). The process of claim 1 wherein the substrate is a biological material.

13. (new). A chemical vapor deposition process for forming a SiO_2 layer on a substrate comprising reacting water with a silicon precursor compound having the structure SiX_4, $Si(NR_2)_4$, $Si(OH)_a(OR)_{4-a}$ or $SiH_b(OR)_{4-b}$ wherein R is an alkyl group, each X is independently a halogen atom, and a and b are numbers from 0-4, in the presence of the substrate at a temperature of between about 290 K and 350 K and in the presence of ammonia or a Lewis base catalyst that is a gas under the conditions of the chemical vapor deposition process, and further wherein the silicone precursor is introduced into the process simultaneously with water and the ammonia or Lewis base catalyst.

14 (new). The process of claim 13 wherein the silicon precursor is $SiCl_4$ or $Si(OR)_4$ where each R contains up to four carbon atoms.

15 (new). The process of claim 13 wherein the temperature is from about 313 to about 333 K.

16 (new). The process of claim 14 wherein the ammonia or Lewis base is added intermittently to the process and the silicon precursor is added during the addition of the ammonia or Lewis base.

17 (new). The process of claim 16 wherein ammonia is added to the process.

18 (new). The process of claim 16 wherein the Lewis base catalyst is a monoalkyl, dialkyl or trialkyl amine.

[rest of page is intentionally blank]